

AMENDMENTS TO THE CLAIMS

A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.

Claim 1 (currently amended): A thermoelectric transducing material comprising a layered cobaltite based substance represented by the chemical formula $A_x\text{CoO}_2$, wherein x is not less than 0.2 and not more than 1 and wherein A ~~the layered cobaltite based substance is structured such that at least one $A'\text{CoO}_2$ layer and at least one $A''\text{CoO}_2$ layer are stacked in a layer thickness direction, and A' and A'' are each consists of an element or element group selected from the group consisting of Na, K, Sr, Ca and Ba alkali metal elements or alkaline earth group elements, and is compositionally modulated in a thickness-wise direction of layers in a structure of the layered cobaltite based substance~~ A' and A'' are different elements.

Claim 2 (canceled).

Claim 3 (currently amended): The thermoelectric transducing material according to claim 2, wherein ~~the composition ratio of A' and the composition ratio of A'' are each x is not less than 0.3 and not more than 0.7.~~

Claim 4 (currently amended): The thermoelectric transducing material according to claim 3, wherein ~~the composition ratio of A' and the composition ratio of A'' are each x is not less than 0.4 and not more than 0.6.~~

Claim 5 (canceled).

Claim 6 (currently amended): The thermoelectric transducing material according to claim 5 [[1]], wherein ~~the layered cobaltite based substance is structured such that a plurality of $A'\text{CoO}_2$ layers and a plurality of $A''\text{CoO}_2$ layers are alternatively stacked in the layer thickness~~

layering of $A_x\text{CoO}_2$ layers corresponding to the respective kinds of elements or element groups is repeated in a layering direction.

Claims 7 and 8 (canceled).

Claim 9 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is an alkali metal element and A'' is an alkaline earth element.

Claim 10 (previously amended): The thermoelectric transducing material according to claim 9, wherein a thermoelectric transduction power factor P is $1.5 \text{ mW/K}^2\text{m}$ or more.

Claim 11 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is an element or element group consisting of an alkali metal element and a thickness of the $A'_x\text{CoO}_2$ [$A'\text{CoO}_2$] layer is not less than 1 nm and not more than 3 nm.

Claim 12 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A'' is an element or element group consisting of an alkali earth group element and a thickness of the $A''_x\text{CoO}_2$ [$A''\text{CoO}_2$] layer is not less than 2 nm and not more than 8 nm.

Claim 13 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein a thickness of the $A'_x\text{CoO}_2$ [$A'\text{CoO}_2$] layer is not less than 1 nm and not more than 3 nm, while a thickness of the $A''_x\text{CoO}_2$ [$A''\text{CoO}_2$] layer is not less than 2 nm and not more than 8 nm.

Claim 14 (original): The thermoelectric transducing material according to claim 13, wherein the thermoelectric transduction power factor P is $2 \text{ mW/K}^2\text{m}$ or more.

Claim 15 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Na and A" is Sr.

Claim 16 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Na and A" is K.

Claim 17 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Na and A" is Ca.

Claim 18 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Na and A" is Ba.

Claim 19 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is K and A" is Ca.

Claim 20 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is K and A" is Sr.

Claim 21 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is K and A" is Ba.

Claim 22 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Ca and A" is Sr.

Claim 23 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Ca and A" is Ba.

Claim 24 (currently amended): The thermoelectric transducing material according to claim [[1]] 30, wherein A' is Sr and A" is Ba.

Claims 25-27 (canceled).

Claim 28 (new): The thermoelectric transducing material according to claim 1, wherein the thermoelectric transducing material comprises plural kinds of element A, and A is compositionally modulated by layering $A_x\text{CoO}_2$ layers corresponding to the respective kinds of elements or element groups.

Claim 29 (new): The thermoelectric transducing material according to claim 29, wherein the thermoelectric transducing material comprises plural kinds of element A.

Claim 30 (new): A thermoelectric transducing material comprising a plural layered cobaltite based substance, at least one layer represented by the chemical formula $A'_x\text{CoO}_2$ and at least one other layer represented by the formula $A''_x\text{CoO}_2$, wherein x is not less than 0.2 and not more than 1 and wherein A' and A'' each consists of an element selected from the group consisting of Na, K, Sr, Ca and Ba, the layered cobaltite based substance is structured such that at least one $A'_x\text{CoO}_2$ layer and at least one $A''_x\text{CoO}_2$ layer are stacked in a layer thickness direction, and is compositionally modulated in a thickness-wise direction of layers in a structure of the layered cobaltite based substance and A' and A'' are different elements.